WHAT IS CLAIMED IS:

1. A power supply comprising:

a rectifying unit for rectifying an AC power into a first DC power and a second DC power and outputting the first and the second DC power;

a main power supply transformer for boosting the first DC power and outputting the boosted first DC power to an output;

a switching controlling unit driven by the second DC power, for performing an operation on said main power supply transformer which causes the first DC power to be boosted when the second DC power is received; and

a controlling unit for determining whether the second DC power is to be supplied to said switching controlling unit,

wherein said controlling unit senses a voltage at the output, and interrupts supplying of the second DC power to the switching controlling unit if the sensed voltage exceeds a given value.

2. The power supply according to claim 1, wherein said controlling unit interrupts supplying of the second DC power to said switching controlling unit if the sensed voltage is a short-circuit voltage.

3. The power supply according to claim 2, further comprising:

an auxiliary power supply transformer for boosting the second DC power; and

a photo-coupler for providing said switching controlling unit with the boosted second DC power based on an output signal of said controlling unit.

4. The power supply according to claim 3, wherein said controlling unit comprises:

a transistor for determining if the second DC power is to be supplied to said switching controlling unit.

5. The power supply according to claim 4, wherein said transistor comprising an emitter terminal, a collector terminal, and a base terminal, is grounded at the emitter terminal, connected to an input terminal of a light-emitting diode of said photo-coupler at the collector terminal, and connected to the output at the base terminal.

6. The power supply according to claim 5, wherein said transistor is implemented as a NPN-type transistor.

7. The power supply according to claim 6, wherein said controlling unit further comprises:

a zener diode connected between the base terminal of said transistor and the output, for turning on the transistor if the first DC power inputted to the output exceeds a given value.

8. The power supply according to claim 7, wherein said controlling unit further comprises:

a diode connected between the collector terminal of said transistor and the output, for interrupting supplying of the second DC power to said switching controlling unit if the input terminal of the output is short-circuited.

9. The power supply according to claim 8, wherein said controlling unit further comprises:

at least two voltage-dividing resistors having a first terminal and a second terminal, connected to the output at the first terminal and grounded at the second terminal,

wherein said controlling unit is implemented for sensing the voltage that is supplied to the output on the basis of the voltage applied to said voltage-dividing resistors.

10. The power supply according to claim 1, wherein said output is connected to an electrical device.

11. The power supply according to claim 9, wherein said output is connected to an electrical device.

12. The power supply according to claim 1, wherein the AC power is externally supplied.

13. The power supply according to claim 9, wherein the AC power is externally supplied.